



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/623,852	03/26/1996	ROBERT A. HARD	623852	3830

7590 09/02/2003  
THOMAS E KELLEY  
CABOT CORPORATION  
157 CONCORD ROAD  
BILLERICA, MA 01821

EXAMINER

BOS, STEVEN J

ART UNIT PAPER NUMBER

1754

DATE MAILED: 09/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

08/623,852

Applicant(s)

Hard et al

Examiner

Steven Bos

Art Unit

1754



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jul 25, 2003
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-17 is/are allowed.
- 6) ☒ Claim(s) 1-13 and 18 is/are rejected.
- 7) ☒ Claim(s) 19-30 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

Art Unit: 1754

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-13,18 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claims 1,18, "a reducing agent to render at least one of the additional metal values insoluble in the digestion mixture" is new matter.

In claims 1,18, "for a period of time ... render at least one of the additional metal values insoluble in the digestion mixture" is new matter.

Applicant points to instant pg. 3, line 29 to pg. 4, line 2 for support however this requires fluoride ion to be present and then only to render uranium insoluble, however the instant claim 1 is of much broader scope as it does not comprise fluoride nor even uranium.

Applicant points to instant pp. 3-4 for support. However this supports only rendering the uranium insoluble whereas instant claim 1 recites rendering additional metal values insoluble. Recitation of a specie does not provide support for a genus. Furthermore, recitation of "without also dissolving significant amounts of uranium" does not provide support for rendering uranium insoluble nor would one skilled in the art make such interpretation. Rather the instant disclosure merely supports adding the reducing agent and the carbon source in an amount sufficient to

Art Unit: 1754

dissolve the metal values "without dissolving significant amounts of uranium." Not only does this not support "rendering uranium insoluble" it in fact suggests that at least some of the uranium is dissolved due to the use of the "significant amounts" language in the above phrase.

Applicant points to instant pg. 5, lines 4-7 which states "separated solids ... other metal values" to support the existence of metal values in the precipitate other than uranium. However the existence of other metal values in the precipitate does not provide support for the instantly claimed use of a reducing agent to render metal values insoluble.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bender '490 taken with Pazdej '777.

Bender teaches the process of solubilizing metals from metal containing material by contacting with sulfuric acid containing a reducing agent and a carbon source (see claims 1,29,36 and the examples).

Bender differs in that the sulfuric acid containing hydrofluoric acid is not stated.

Pazdej teaches the use of sulfuric acid and hydrofluoric acid to solubilize metals (see the figures and claims).

Art Unit: 1754

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use sulfuric acid containing hydrofluoric acid to dissolve metals in the process of Bender because that is what is taught by Pazdej as desirable.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results, see *In re Aller*, 105 USPQ 233.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, *In re Malagari*, 182 USPQ 549.

Claims 14-30 appear allowable over the cited prior art of record none of which teaches or suggests the instantly claimed combination of process steps for treating tantalum or niobium containing material.

Claims 19-30 are objected to as depending on a rejected base claim.

Applicant's arguments filed July 25, 2003 have been fully considered but they are not persuasive.

Art Unit: 1754

Applicant states that neither Bender nor Pazdej, alone or in combination, suggest a separate reducing agent and a carbon source. Applicant argues that the teaching in Bender likely refers to a raw mineral which contains both sulfide and carbonaceous materials, thus the carbon and reductant source taught in Bender are the same.

However this argument is unpersuasive since claim 36 of Bender does not recite nor require that a raw mineral contain both the sulfide and carbon source. Bender suggests the use of a mixture of a reductant or reducing agent, eg. sulfide, and a carbon source which differs from the reducing agent, eg. carbonaceous material. Therefore it is not necessary for Pazdej to teach or suggest same.

It is noted that in claims 9,26, "(the filtrate)" appears to be superfluous and should be deleted.

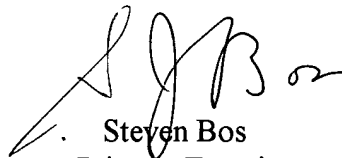
**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,

Art Unit: 1754

will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Bos whose telephone number is (703) 308-2537. The examiner is on the increased flexitime program schedule and can normally be reached between 8AM and 6PM Monday through Friday. The FAX No. for amendments is 703-872-9306. Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to read 'SJB' with a flourish at the end.

Steven Bos  
Primary Examiner  
Art Unit 1754